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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PONIKIEWSKI, TOMASZ

ART UNIT	PAPER NUMBER
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2165

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/734,112	LOU, YONGMING	
	Examiner	Art Unit	
	Tomasz Ponikiewski	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 1,2,7-9,13,22-30 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-6,10-12,14-21 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/12/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-35 are pending.

Election/Restrictions

2. Applicant's election with traverse of groups I, III, IV and V in the reply filed on 08/09/2006 is acknowledged. The traversal is on the ground(s) that inventions are classified in the same class. This is not found persuasive because some classes can encompass many different directions in the art. Rollbacking as in claim 1 doesn't have to use the specifics of creating online point-in-time. Rollback could easily be just done on a tables or rows in a database and end there.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

3. Claims 3-6, 11-12, 14, 19 and 34 are objected to because of the following informalities:

Claims 3-6, 11-12, 14, 19 and 34 are objected to because of the following informalities: the recitation of "or" makes the statement(s) following the recitation totally optional. As such the action does not have to occur. Any recitation dependant on either option will not have to take place. Appropriate correction is required.

Claim 34 is objected to because of the following informalities: the recitation of "if" makes the statement(s) following the recitation totally optional. As such the action does not have to occur. Appropriate correction is required.

Claims 3-6, 10, 14, 20-21, 31 recite "at least one" throughout the claims. Such recitation means that only one of the limitations needs to be satisfied.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 3-6, 10, 14, 31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 3-6, 10, 14, 31 does not list any hardware (i.e. computer) tied to the steps in order to operate the steps of the claims therefore resulting in software only implementation. Claim 31 needs a processor for the code to perform its functionality.

Claims 3-6, 10, 14 and 31 do not specify an output at the end of the claim. No output is presented or stored for subsequent use. It is unclear what the end result of the steps of the claims is.

Claim 14 recites word "for use" and "for performing" in line 1. The limitations following the phrase "for use" and "for performing" describes only intended use but not necessarily required functionality of the claim. As such it carries no patentable weight. Claim should be amended to recite "system implemented with an active" and "to perform".

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 3-6, 10, 14 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3-6, and 10 recite, "enabling". Enabling does not mean that the step is being accomplished. It suggests a capability but not necessarily taking place. It should be amended to recite definite language i.e. "configured to".

Claim 14 recites "for performing at least one of online selective rollbacking" in the preamble. The body of the claim never actually executes a rollback. There is no nexus between preamble and body of claim and it does not achieve the intended use of executing a search as recited in preamble.

Claims 3-6, 10 and 31 are objected to because of the following: the term "all related integrity constraints" is vague and indefinite. It is unclear to the examiner what the terms refer to. There could be multitude of constraints and the claim does not specify the concrete limitation of the term.

Claims 4, 6, 11, 12 recite the limitation "a transaction id" in the body of the claims. It is unknown whether is a new declaration or not. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recite the limitation "a group of tables" in lines 3, 5 and 6. It is unknown whether is a new declaration or not. There is insufficient antecedent basis for this limitation in the claim.

Claims 32 and 34 recite the limitation "a unique session id" in the claims. It is unknown whether is a new declaration or not. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 is objected to because of the following: the limitation "fields associated with a user session" is vague and indefinite. It is unclear to the examiner what the terms refer to.

Claim 19 is objected to because of the following: the term "login/logout" followed by "enters or exit" is vague and indefinite. It presents a choice wherein one action may not be chosen.

Claim 14 recites the limitation "the first table" in last line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 3-6, 10, 14, 16--18, 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Klein et al. (US 6,397,227 B1).

As per claim 3 Klein et al. is directed to a method of rollbacking at least one table of an active database to a point-in-time, having at least one before image table and at least one after image table, the method comprising:

retrieving a retention time for each of the at least one table (column 22, lines 11-13, wherein the log would keep the retention time for the updates);

determining that none of the retention times for the at least one table is greater than the point-in-time (column 12, lines 20-25);

locking all tables to be rolled back and disabling all related integrity constraints (column 10, lines 60-61, wherein row could be replaced with a table);

deleting rows from each of the at least one after image table having a timestamp greater than the point-in-time (column 12, lines 7-17, wherein the range could mean the point-in time);

inserting into each of the at least one after image table, rows from the associated before image table having a timestamp less than or equal to the point-in-time and having a changing timestamp greater than the point-in-time (column 12, lines 7-17); and enabling all related integrity constraints (column 12, lines 48-50).

As per claim 4 Klein et al. is directed to a method of rolling back at least one table of an active database to a point-in-time, having at least one before image table and at least one after image table, the method comprising:

retrieving a retention time for each of the at least one table (column 22, lines 11-13, wherein the log would keep the retention time for the updates);

determining that none of the retention times for each of the at least one table is greater than the point-in-time (column 12, lines 20-25);

retrieving a transaction id set associated with a transaction id that begins before or at the point-in-time and ends after the point-in-time (column 13, lines 7-9; column 22, lines 11-15);

locking all tables to be rolled back and disabling all related integrity constraints (column 10, lines 60-61, wherein row could be replaced with a table);

deleting rows from each of the at least one after image table having a timestamp greater than the point-in-time or having a transaction id that is a proper subset of the transaction id set (column 12, lines 7-17, wherein the range could mean the point-in time);

inserting into each of the at least one after image table, rows from the associated before image table having a timestamp less than or equal to the point-in-time and having a transaction id that is not a proper subset of the transaction id set, and having a changing transaction id that is a proper subset of the transaction id set or having a changing timestamp that is greater than the point-in-time (column 9, lines 9-12; column 13, lines 7-9; column 12, lines 7-17); and

enabling all related integrity constraints (column 12, lines 48-50).

As per claim 5 Klein et al. is directed to a method of rollbacking selected rows in a table of an active database to a point-in-time, the database having at least one before image table and at least one after image table, the method comprising:

retrieving a retention time of the table (column 22, lines 11-13, wherein the log would keep the retention time for the updates);

determining that the point-in-time is greater than or equal to the retention time (column 12, lines 20-25);

locking the table to be rollbacked and disabling all related integrity constraints (column 10, lines 60-61, wherein row could be replaced with a table);

deleting selected rows from the after image table having a timestamp greater than the point-in-time (column 12, lines 7-17, wherein the range could mean the point-in time);

inserting into the after image table, selected rows from the before image table having a timestamp less than or equal to the point-in-time and having a changing timestamp that is greater than the point-in-time (column 12, lines 7-17); and

enabling all related integrity constraints (column 12, lines 48-50).

As per claim 6 Klein et al. is directed to a method of rollbacking selected rows in a table of an active database to a point-in-time, the database having at least one before image table and at least one after image table, the method comprising:

retrieving a transaction id set associated with a transaction id that begins before or at the point-in-time and ends after the point-in-time (column 12, lines 20-25; column 22, lines 11-15);

retrieving a retention time of the table (column 22, lines 11-13, wherein the log would keep the retention time for the updates);

determining that the point-in-time time is greater than or equal to the retention time (column 12, lines 20-25);

locking the table to be rollbacked and disabling all related integrity constraints (column 10, lines 60-61, wherein row could be replaced with a table);

deleting selected rows from the after image table having a timestamp greater than the point-in-time or having a transaction id that is a member of the transaction id set (column 12, lines 7-17, wherein the range could mean the point-in time);

inserting into the after image table, selected rows from the before image table having a timestamp that is less than or equal to the point-in-time and having a transaction id that is not a proper subset of the transaction id set, and having a changing transaction id that is a proper subset of the transaction id set or having a changing timestamp that is greater than the point-in-time (column 9, lines 9-12; column 12, lines 7-17; column 13, lines 7-9; column 12, lines 7-17); and

enabling all related integrity constraints (column 12, lines 48-50).

As per claim 10 Klein et al. is directed to a method of rollbacking a transaction id set in a group of tables of an active database, the database having at least one before image table and at least one after image table, the method comprising:

retrieving an earliest starting time of the transaction id set (column 9 lines 52-54; wherein the earliest time is the first time registered for update);

retrieving a latest retention time for all of the tables (column 12, lines 15-18, wherein retention time could mean scan range);

determining that the earliest starting time is greater than the latest retention time (column 12, lines 20-25);

locking all tables to be rollbacked and disabling all related integrity constraints (column 10, lines 60-61, wherein row could be replaced with a table);

rollbacking the transaction id set in the group of tables (column 2, lines 61-67;
column 3, line 1); and
enabling all related integrity constraints (column 12, lines 48-50).

As per claim 14 Klein et al. is directed to a system for use with an active database for performing at least one of online selectively rollbacking at least one application table or selected application data in at least one table, creating online point-in-time views of application tables, providing online history images associated with the database, reconstructing equivalent SQL statements of a committed transaction, reconstructing equivalent SQL statements of a user session, and providing a selective audit trail report on demand, the system comprising:

a plurality of user application after image tables, wherein each of the tables has one before image table to store before images, and one after image view (column 2, lines 61-67; column 3, line 1, wherein log could be a table);

a table comprising a table name field, a retention time field, and an export timestamp field (column 22, lines 14-14, wherein each log entry could be a table);

an image manager that creates image views (column 21, lines 61-66); and

a rollback manager that manages the first table (column 21, lines 34-36).

As per claim 16 Klein et al. is directed to comprising a third table including fields associated with a transaction id, starting timestamp, and ending timestamp (column 22, lines 14-14, wherein each log entry could be a table).

As per claim 17 Klein et al. is directed to image manager further comprising:
an inserting trigger that sets parameters for an inserted row in the after image tables (column 21, lines 62-66);
an updating trigger that inserts an original row into a before image table and sets parameters associated with the changed row in the after image tables and the before image tables (column 3, lines 1-7); and
a deleting trigger that inserts the original row into the before image table and sets parameters associated with the changed row in the before image tables (column 3, lines 1-7).

As per claim 18 Klein et al. is directed to a transaction trigger that records each transaction id (column 9, lines 52-55).

As per claim 20 Klein et al. is directed to the after image tables further comprising at least one of a timestamp field, user id field, and transaction id field (column 22, lines 14-19).

As per claim 21 wherein the rollback manager performs at least one of
rollbacking at least one table to a point-in-time, rollbacking selected rows in a single table to a point-in-time, rollbacking a transaction id set in a group of tables, rollbacking all transactions made in a user session, reconstructing equivalent SQL statements of a

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transaction id set in a group of tables, reconstructing equivalent SQL statements of a user session in a group of tables, and providing a selective audit trail report on demand (column 2, lines 61-64).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 15, 19 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al. (US 6,397,227 B1) in view of Dustan et al. (US 5,884,312).

As per claim 15 Klein et al. does not teach a second table including fields associated with a user session.

Dustan et al. does teach a second table including fields associated with a user session (Dustan et al., column 3, lines 53-59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Klein et al. with teachings of Dustan et al. to include a second table including fields associated with a user session because it allows for secure access to the information (Dustan et al., column 3, line 44).

As per claim 19 Klein et al. does not teach a login/logout trigger that records a time when a user enters or exits the database.

Dustan et al. does teach a login/logout trigger that records a time when a user enters or exits the database (Dustan et al., column 13, lines 11-13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Klein et al. with teachings of Dustan et al. to include a login/logout trigger that records a time when a user enters or exits the database because it allows to keep information about user sessions.

As per claim 31 Klein et al. is directed to a method of rollbacking transactions made in a user session in a group of tables of an active database, the database having at least one before image table and at least one after image table, the method comprising:

retrieving a latest retention time for all of the tables (column 12, lines 15-18, wherein retention time could mean scan range);

determining that the starting time is greater than the latest retention time (column 12, lines 20-25);

locking all tables to be rollbacked and disabling all related integrity constraints (column 10, lines 60-61, wherein row could be replaced with a table);

rollbacking the transactions made in the user session in the group of tables (column 2, lines 61-67; column 3, line 1); and

enabling all related integrity constraints (column 12, lines 48-50).

Klein et al. does not teach retrieving a starting time, an ending time, a unique session id of the user session;

Dustan et al. does teach retrieving a starting time, an ending time, a unique session id of the user session (Dustan et al., column 3, lines 20-21; Dustan et al., column 13, lines 11-13, Dustan et al., column 18, lines 7-9);

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Klein et al. with teachings of Dustan et al. to include retrieving a starting time, an ending time, a unique session id of the user session because it allows to keep information about user sessions.

As per claim 32 Klein et al. as modified is directed to the unique session id comprises a unique session id provided by a database vendor (Dustan et al., column 9, lines 9-10).

As per claim 33 Klein et al. as modified is directed to the unique session id comprises a session id and the starting timestamp of the session (Dustan et al., column 18, lines 10-12).

Allowable Subject Matter

12. Claim 34 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tomasz Ponikiewski whose telephone number is (571)272-1721. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (571)272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tomasz Ponikiewski
September 14, 2006


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